

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A semiconductor integrated circuit comprising:

a first controlling circuit section ~~inputted with having input thereto~~ an input signal having an amplitude between a low voltage and the ground, said first controlling circuit operating with the low voltage of an electricity source of the low voltage, said first controlling circuit outputting putting out a first control signal generated by said the input signal, outputting putting out an inverse signal of the first control signal, and outputting putting out a second control signal generated from the first control signal[[,]];

a level transforming circuit ~~having input thereto inputted with said the first control signal~~ ~~[,]~~ inputted with said and the inverse signal, and outputting putting out a first signal having an amplitude between said the low voltage and a high voltage higher than said the low voltage[[,]];

a first buffer circuit ~~which has having~~ a first p-channel type MOS transistor connected between ~~said high voltage of an electricity source of the high voltage~~ and a first output node, wherein a gate of said first p-channel type MOS transistor is supplied with said the first signal, and ~~which has said first buffer circuit having~~ a first n-channel type MOS transistor connected between said first output node and the electricity source of the low voltage ground, wherein a gate of said first n-channel type MOS transistor is supplied with said the first signal, and wherein said first buffer circuit outputs puts out a second signal having an amplitude between said the high voltage and said the low voltage to said first output node;

a second buffer circuit ~~which has having~~ a second p-channel type MOS transistor connected between ~~said low voltage of the electricity source of the low voltage~~ and a second output node, wherein a gate of said second p-channel type MOS transistor is supplied with said the second control signal, said second buffer circuit having a and which has second n-channel type MOS transistor connected between said second output node and the ground, wherein a gate of said second n-channel type MOS transistor is supplied with the said second control signal, and wherein said second buffer circuit puts out outputs a third signal having an amplitude between said the low voltage and the ground to said second output node; and

an overvoltage protecting circuit which has having a drain of said a third p-channel type MOS transistor connected with a third output node, wherein a source of said third p-channel type MOS transistor is supplied with said the second signal, said overvoltage protecting circuit having and which has a drain of said a third n-channel type MOS transistor connected with said third output node, wherein a source of said third n-channel type MOS transistor is supplied with said the third signal, and wherein each gate of said third p-channel type MOS transistor and said third n-channel type MOS transistor is supplied with said the low voltage in common, and puts out wherein said overvoltage protecting circuit outputs a fourth signal having an amplitude between said the high voltage and the ground to said third output node.

2. (Currently Amended) A semiconductor integrated circuit according to Claim 1[[:]], further comprising a pre-buffer circuit connected with the output of said level transforming circuit, wherein said pre-buffer circuit outputs the so as to put out said first signal having an amplitude between the high voltage and the low voltage.

3. (Currently Amended) A semiconductor integrated circuit according to Claim 2[[:]], wherein said pre-buffer circuit adjusts a timing of inputting said first buffer circuit with said the first signal.

4. (Currently Amended) A semiconductor integrated circuit according to Claim 1[[:]], wherein a turning on resistance of said first p-channel type MOS transistor in said first buffer circuit is set higher than a turning on resistance of said third p-channel type MOS transistor, and

wherein a turning on resistance of said second n-channel type MOS transistor in said second buffer circuit is set higher than a turning on resistance of said third n-channel type MOS transistor in said overvoltage protecting circuit.

5. (Currently Amended) A semiconductor integrated circuit according to Claim 1[[:]], wherein a substrate substrates of said first n-channel type MOS transistor in said first buffer circuit is connected with a source of said first n-channel type MOS transistor, and a substrate of said third n-channel type MOS transistor in said overvoltage protecting circuit is connected with said source of said third n-channel type MOS transistor[[:]].

wherein said substrate of said first n-channel type MOS transistor and said substrate of said third n-channel type MOS transistor are isolated from a substrate of said second n-channel type MOS transistor.

6. (Currently Amended) A semiconductor integrated circuit according to Claim 1[[:]], wherein a substrate of said third p-channel type MOS transistor is connected with said source of said third p-channel type MOS transistor, and is isolated from substrates of said first and second p-channel type MOS transistor transistors.

7. (Currently Amended) A semiconductor integrated circuit according to Claim 1[[:]], wherein said p-channel type MOS transistors and said n-channel type MOS transistors are formed on an active region isolated by an insulating film.

8. (Currently Amended) A semiconductor integrated circuit comprising:
a first controlling circuit section inputted with having input thereto a data input signal having an amplitude between a low voltage and the ground, and having input thereto inputted with an enable signal, said first controlling circuit operating with the low voltage of an electricity source of the low voltage, said first controlling circuit outputting putting out a first control signal generated by said the data input signal and said the enable signal, outputting putting out a first inverse signal of the first control signal, outputting putting out a second control signal generated by said the data input signal and said the enable signal, outputting putting out a second inverse signal of the second control signal, outputting putting out a third control signal generated from

the first control signal, and outputting putting out a fourth control signal generated from the second control signal[[,]];

a first level transforming circuit having input thereto the inputted with said first control signal[[,]] and the inputted with said first inverse signal, and outputting putting out a first signal having an amplitude between said the low voltage and a high voltage higher than said the low voltage[[,]];

a second level transforming circuit having input thereto the inputted with said second control signal[[,]] and the inputted with said second inverse signal, and outputting putting out a second signal having an amplitude between said the low voltage and a high voltage higher than said the low voltage[[,]];

a first buffer circuit having a which has first p-channel type MOS transistor gate of said first p-channel type MOS transistor supplied with said the first signal, said first p-channel type MOS transistor connected between said high voltage of the electricity source of the high voltage and a first output node, said first buffer circuit having a and which has first n-channel type MOS transistor gate of said first n-channel type MOS transistor supplied with said the second signal, said first n-channel type MOS transistor connected between said first output node and the electricity source of the low voltage ground, and wherein said first buffer circuit outputs puts out a third signal having an amplitude between said the high voltage and said the low voltage to said first output node;

a second buffer circuit having a which has second p-channel type MOS transistor gate of said second p-channel type MOS transistor supplied with said the third control signal, said second p-channel type MOS transistor connected between said low voltage of the electricity source of the low voltage and a second output node, said second buffer circuit having a and which has second n-channel type MOS transistor gate of said second n-channel type MOS transistor supplied with said the fourth control signal, said second n-channel type MOS transistor connected between said second output node and the ground, and wherein said second buffer circuit outputs puts out a fourth signal having an amplitude between said the low voltage and the ground to said second output node; and

an overvoltage protecting circuit having a which has third p-channel type MOS transistor source of said third p-channel type MOS transistor supplied with said the third signal, wherein a drain of said third p-channel type MOS transistor is connected with a third output node, said overvoltage protecting circuit having a and which has third n-channel type MOS transistor source of said third n-channel type MOS transistor supplied with said the fourth signal, wherein a drain of said third n-channel type MOS transistor is connected with said third output node, and wherein each gate of said third p-channel type MOS transistor and said third n-channel type MOS transistor is supplied with said the low voltage in common, and wherein said overvoltage protecting circuit outputs puts out a fifth signal having an amplitude between said the high voltage and the ground to said third output node.

9. (Currently Amended) A semiconductor integrated circuit according to Claim 8[[:]], further comprising a pre-buffer circuit connected with the output of said level transforming circuit, wherein said pre-buffer circuit outputs the so as to put out said first signal having an amplitude between the high voltage and the low voltage.

10. (Currently Amended) A semiconductor integrated circuit according to Claim 9[[:]], wherein said pre-buffer circuit adjusts a timing of inputting said first buffer circuit with said the first signal.

11. (Currently Amended) A semiconductor integrated circuit according to Claim 8[[:]], wherein a turning on resistance of said first p-channel type MOS transistor in said first buffer circuit is set higher than a turning on resistance of said third p-channel type MOS transistor, and

wherein a turning on resistance of said second n-channel type MOS transistor in said second buffer circuit is set higher than a turning on resistance of said third n-channel type MOS transistor in said overvoltage protecting circuit.

12. (Currently Amended) A semiconductor integrated circuit according to Claim 8[[:]], wherein a substrate substrates of said first n-channel type MOS transistor in said first buffer circuit is connected with a source of said first n-channel type MOS transistor, and a substrate of said third n-channel type MOS transistor in said overvoltage protecting circuit is connected with said source of said third n-channel type MOS transistor[[;]].

wherein said substrate of said first n-channel type MOS transistor and said substrate of said third n-channel type MOS transistor are isolated from a substrate of said second n-channel type MOS transistor.

13. (Currently Amended) A semiconductor integrated circuit according to Claim 8[[:]], wherein a substrate of said third p-channel type MOS transistor is connected with said source of said third p-channel type MOS transistor, and is isolated from substrates of said first and second p-channel type MOS transistor transistors.

14. (Currently Amended) A semiconductor integrated circuit according to Claim 8[[:]], wherein said p-channel type MOS transistors and said n-channel type MOS transistors are formed on an active region isolated by an insulating film.